

Claims

1 1. A method of extracting two-dimensional image shapes
2 from a two-dimensional array of pixel data, the method
3 comprising the steps of:
4
5 selecting intensity vs. pixel information in at least one
6 direction in the vicinity of an edge of the image shape;
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8 recognizing scans with sufficient contrast as containing
9 edge information;
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11 subjecting acceptable scans to an edge detection
12 algorithm;
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14 detecting the edge location; and
15
16 generating a locus of points that define the two-
17 dimensional shape of the image from the detected edge
18 values.

1 2. A method according to Claim 1, wherein the edge
2 detection algorithm is a user defined edge detection
3 algorithm that is tailored to the application.

1 3. A method according to Claim 1, wherein the selecting
2 step includes the step of selecting intensity vs. pixel
3 information in a plurality of directions in the vicinity
4 of an edge of the image shape.

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1 4. A method according to Claim 3, wherein the selecting
2 step includes the step of selecting intensity vs. pixel
3 information in at least four directions.

1 5. A method according to Claim 1, wherein said at least
2 one direction is normal to the approximate edge location.

1 6. Apparatus for extracting two-dimensional shape
2 information from an image, of a submicron structure,
3 formed on an array of detectors, comprising:

means for determining intensity vs. detector location
6 information for detectors on at least one scan in at
7 least one direction in the vicinity of an edge of the
8 image;

9
10 means for processing identified scans according to an
11 edge detection algorithm to identify points on the edge
12 of the image; and

13
14 means for generating a locus of points that define the
15 two-dimensional shape of the structure from the
16 identified edge points.

1 7. Apparatus according to Claim 6, wherein the edge
2 detection algorithm is a user defined edge detection
3 algorithm that is tailored to the application.

1 8. Apparatus according to Claim 6, wherein the selecting
2 means includes means for selecting intensity vs. pixel

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information ~~in~~ a plurality of directions in the vicinity
of an edge ~~of~~ the image shape.

9. Apparatus according to Claim 8, wherein the plurality
of directions includes at least four directions.

10. Apparatus according to Claim 6, wherein said at least
one direction is normal to an approximate edge location.

11. A program storage device readable by machine,
tangibly embodying a program of instructions executable
by the machine to perform method steps for extracting
two-dimensional image shapes from image data on a pixel
array, the method steps comprising:

selecting intensity vs. pixel information in at least one
direction in the vicinity of an edge of the image shape;

recognizing scans with sufficient contrast as containing
edge information;

subjecting acceptable scans to an edge detection
algorithm;

detecting the edge location; and

generating a locus of points that define the two-
dimensional shape of the image from the detected edge
values.

12. A program storage device according to Claim 11,
wherein the edge detection algorithm is a user defined

3 edge detection algorithm that is tailored to the.
4 application.

1 13: A program storage device according to Claim 11,
2 wherein the selecting step includes the step of selecting
3 intensity vs. pixel information in a plurality of
4 directions in the vicinity of an edge of the image shape.

1 14. A program storage device according to Claim 13,
2 wherein the selecting step includes the step of selecting
3 intensity vs. pixel information in at least four
4 directions.

1 15. A program storage device according to Claim 11,
2 wherein one of the directions is normal to an approximate
3 edge location.

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